REMARKS

This application has been carefully considered in connection with the Examiner's Office Action dated August 23, 2007. Reconsideration and allowance are respectfully requested in view of the following.

Summary of Rejections

Claims 21-34 were rejected under 35 USC 101.

Claims 21-34 were rejected under 35 USC 112, second paragraph.

Claims 1-4, 5, 6-11, 12-14, 15, 16, 17-20, 21-31, 32-34, 35-38 were rejected under 35 USC 103(a).

Summary of Response

Claims 21-23, 28, 30-32, and 35 are currently amended.

Claims 1 and 12-14 were previously presented

Claims 2-11, 15-20, 24-27, 29, 33, 34, and 36-38 remain as originally filed.

Summary of Claims Pending:

Claims 1-38 are currently pending following this response.

Applicant Initiated Interview

Applicant thanks Examiner Wang for his time and consideration of the proposed amendments and arguments presented in the telephone interview on November 7, 2007. In the interview, Examiner Wang indicated that further review of the applied art in light of the arguments presented in the interview may be necessary. Examiner Wang also suggested further amending

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claim 21 in order to overcome the 35 U.S.C. 101 and 112, second paragraph rejections. The claims are amended herein as suggested by Examiner Wang and detailed in the following arguments.

Response to Rejections under 35 USC 101

In the Office Action dated August 23, 2007, claims 21-34 were rejected under 35 USC § 101 because the claims are directed to non-statutory subject matter. As mentioned above, Examiner Wang suggested in the interview to further amend claim 21 in order to overcome the rejection under 35 U.S.C. 101. In particular, Examiner Wang suggested to amend claim 21 such that the claimed module performs some act. In accordance with Examiner Wang's suggestion, claim 21 has been amended herein to recite, "a module stored on a computer-readable medium **that performs reading** of the compile listing **and obtaining** the offset of at least one of the plurality of variables of the application" (emphasis added). Claims 31 and 32 have been similarly amended. Applicant respectfully submits that the dependent claims 22-34 are similarly directed to statutory subject matter.

Response to Rejections under 35 USC 112

In the Office Action dated August 23, 2007, claims 21-34 were rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As discussed in detail above, claim 21 has been amended as suggested by Examiner Wang to perform an act. Accordingly, Applicant respectfully submits that the amendment has overcome the rejection under 35 U.S.C. 112, second paragraph and respectfully requests this rejection be withdrawn. Applicant respectfully submits that the dependent claims 22-34 are similarly definite.

Response to Rejections

The pending specification is directed to non-intrusively monitoring an application during real-time operation of the application. As disclosed in paragraphs 0044-0050, an application writes values of variables of the application, or "application values" as claimed, in a memory area during normal real-time operation. For example, as disclosed in paragraph 0048, when the application is executed it is loaded into computer system memory. A monitor module 18 may attach to the memory area used by the application so as to retrieve the values of variables used by the application. As disclosed in paragraph 0049, because the monitor module 18 attaches to the memory area of the application, "the applications 12, 22 do not need to be changed to enable the operation of the application monitor system 10." Further, attaching to the memory area used by the application during normal real-time operation enables the monitor module 18 to have access to all of the variables of the application. Therefore, the monitor module 18 may access even internal variable values that are not otherwise accessible without changing the application or encapsulating the application.

None of the applied art teaches or suggests a monitor that reads application values from a memory area used by the application during real-time operation. This and other distinctions are discussed in more detail below.

Response to Rejections under 35 USC 103

Claims 1-4, 6-11, 12-14, and 17-20 were rejected under 35 USC § 103(a) as being unpatentable over Sridharan et al. (*On Building Non-Intrusive Performance Instrumentation Blocks for CORBA-based Distributed Systems,* March 2000, IEEE) (hereinafter "Sridharan") in

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view of Tao et al (*Understanding the Behavior of Shared Memory Applications Using the SMiLE Monitoring Framework*, March 2000, IEEE) (hereinafter "Tao").

Claim 1:

I.   Sridharan in view of Tao does not teach or suggest a first module that reads application values from memory that have been stored by the application during real-time operation.

Claim 1 requires, "a first module ... that attaches to a memory area that is used by an application during real-time operation, the first module reads application values from the memory area that have been stored in the memory area by the application during real-time operation."

The Office Action relied on the disclosure in Sridharan of the Performance Instrumentation (PI) module. Sridharan discloses non-intrusively monitoring the performance of methods in various servers at run-time. Sridharan discloses in paragraph 2 of page 3, "The PI instance retrieves performance details for that particular server." Therefore, Sridharan only monitors the performance, and does not disclose monitoring "application values ... that have been stored in the memory area by the application during real-time operation," as claimed. For example, Sridharan discloses in the last paragraph of page 3, "A GUI was implemented to display the various performance data (e.g., average, maximum, minimum latency values for methods in various servers)." Applicant respectfully submits that the obtaining performance measurements for methods operating on a server is not the same as reading application values stored in memory by an application during operation.

Claim 1 also requires, "a first module ... that attaches to a memory area that is used by an application." Based on the interpretation that the PI module is the claimed first module, the server might be interpreted as the claimed application. For example, Sridharan discloses in the first paragraph of page 3 that the PI module and the server are loaded into a single address space.

Applicant does not concede that this paragraph provides disclosure of "attaching" to a memory as claimed. In any case, the server of Sridharan is the closest disclosure of the claimed application. The only values disclosed by Sridharan are parameter values P1 and P2 that are passed with an **incoming** request for a service P on the server F. Applicant notes that these values are not stored in the address space by the server. Therefore, these parameter values do not provide disclosure of "application values ... that have been stored in the memory area **by the application**" (emphasis added).

Tao discloses in section IV that a visualizer may be used by a programmer before execution to rationally distribute data among processors in a distributed shared memory (DMS) system. Tao discloses that the improvement of data locality can be made by a programmer, "before execution, i.e., the data is already placed in an appropriate processor at allocation time" (first paragraph of section IV on page 5). Tao also discloses, "In the case when the programmer is responsible for the locality optimization a visualizer is needed to show the monitoring information to the programmer vividly" (second paragraph of section IV on page 5). Tao further discloses, "A mechanism for mapping each memory location observed by the monitoring system to its corresponding program data structure identifier (procedure and variable names) is being implemented as well" (fifth paragraph of section IV on page 5). The mechanism disclosed by Tao aids the programmer in optimizing the distribution of data among processors before execution. Therefore, Tao does not disclose reading application **values**, but rather discloses displaying application data structure identifiers such as procedures and variable names. Further, Tao discloses displaying the application data structure identifiers **before execution**, and not "during real-time operation," as claimed. Therefore Tao does not disclose reading "application values from the memory area that have been stored in the memory area by the application during real-time operation," as claimed.

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For at least the reasons established above in section I, Applicant respectfully submits that independent claim 1 is not taught or suggested by the cited art and respectfully request allowance of this claim.

Dependent claims 2-4, 6-11 depend directly or indirectly from independent claim 1 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in section I above, Applicant respectfully submits that claims 2-4, 6-11 are not taught or suggested by the cited art and respectfully request allowance of these claims.

Claim 12:

Claim 12 includes limitations substantially similar to the limitations discussed in section I above. For example, claim 12 requires, "storing, by the application, the application values in a memory area during the operation of the application" and "reading, by a monitor, the memory area used by the application to obtain the application values." For at least the reasons established above in section I, Applicant respectfully submits that independent claim 12 is not taught or suggested by the cited art and respectfully request allowance of this claim.

II.   Sridharan in view of Tao does not teach or suggest a monitor reading at least one application value that is not output by the application.

Claim 12 recites, "reading, by a monitor, the memory area used by the application to obtain the application values, where at least one of the application values is not output by the application." Applicant notes paragraphs 0005, 0017, and 0049. Therefore, the claims provide a method of accessing internal variable values of an application that were otherwise not accessible.

As noted in the arguments of section I, Sridharan in view of Tao does not teach or suggest reading application values from memory. Therefore, Sridharan in view of Tao also does not teach or suggest that at least one of the application values is not output by the application. Further,

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Sridharan in view of Tao do not provide any further teaching or suggestion of reading application values that are generated by an application during operation and are not output by the application.

Dependent claims 13, 14, and 17-20 depend directly or indirectly from independent claim 12 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in sections I and II above, Applicant respectfully submits that claims 12-14 and 17-20 are not taught or suggested by the cited art and respectfully request allowance of these claims.

In the Office Action dated August 23, 2007, claims 5, 15 and 35-38 were rejected under 35 USC § 103(a) as being unpatentable over Sridharan in view of Tao and further in view of Hiroshi Kashima (*An Approach for Constructing Web Enterprise Systems on Distributed Objects*, Jan., 2002, IBM) (hereinafter "Kashima").

Claims Depending From Claim 1:

Dependent claim 5 depends directly or indirectly from independent claim 1 and incorporates all of the limitations thereof. Accordingly, for at least the reasons established in section I above, Applicant respectfully submits that claim 5 not taught or suggested by the cited art and respectfully requests allowance of this claim.

Claims Depending From Claim 12:

Dependent claim 15 depends directly or indirectly from independent claim 12 and incorporates all of the limitations thereof. Accordingly, for at least the reasons established in sections I and II above, Applicant respectfully submits that claim 15 is not taught or suggested by the cited art and respectfully requests allowance of this claim.

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Claim 35:

Claim 35 includes limitations substantially similar to the limitations discussed in section I above. For example, claim 35 requires, "a COBOL program stored on a computer-readable medium that generates program values and stores the program values in the memory area during real-time operation of the COBOL program" and "a COBOL monitor module ... that ... reads the program values stored in the memory area by the COBOL program during real-time operation of the COBOL program." For at least the reasons established above in section I, Applicant respectfully submits that independent claim 35 is not taught or suggested by the cited art and respectfully request allowance of this claim.

III.   Sridharan in view of Tao and in view of Kashima do not teach or suggest a COBOL monitor module that shares the memory area with the COBOL program through a technical layer.

Claim 35 has been amended herein to recite, "a COBOL monitor module stored on a computer-readable medium that shares the memory area with the COBOL program though a technical layer and the COBOL monitor module reads the program values stored in the memory area by the COBOL program during real-time operation of the COBOL program." Applicant respectfully submits that this amendment does not introduce any new matter and is fully supported in at least paragraphs 0026-0035 of the specification as originally filed.

As disclosed in paragraph 0026 of the pending specification, COBOL does not provide native support for shared memories. Therefore, the general disclosure of the existence of COBOL programs in Kashima does not disclose "a COBOL monitor module ... that shares the memory area with the COBOL program". Further, paragraphs 0028-0035 of the specification provide a detailed description of the shared memory routine of the claimed technical layer that provide support for shared memory in COBOL programs. Claim 35 has been amended herein to further

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clarify that the COBOL monitor module shares the memory area with the COBOL program "through a technical layer." Applicant respectfully submits that Kashima does not provide any teaching or suggestion of enabling shared memory between two COBOL programs through a technical layer.

For at least the reasons established above in sections I and III, Applicant respectfully submits that independent claim 35 is not taught or suggested by the cited art and respectfully requests allowance of this claim.

Dependent claims 36-38 depend directly or indirectly from independent claim 35 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in sections I and III above, Applicant respectfully submits that claims 36-38 are not taught or suggested by the cited art and respectfully request allowance of these claims.

In the Office Action dated August 23, 2007, claim 16 was rejected under 35 USC § 103(a) as being unpatentable over Sridharan in view of Tao and further in view of Huang et al., (*Operating System Support for Flexible Coherence in Distributed Shared Memory*, 1996, IEEE) (hereinafter "Huang").

Claims Depending From Claim 12:

Dependent claim 16 depends directly or indirectly from independent claim 12 and incorporates all of the limitations thereof. Accordingly, for at least the reasons established in sections I and II above, Applicant respectfully submits that claim 16 is not taught or suggested by the cited art and respectfully requests allowance of this claim.

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In the Office Action Dated August 23, 2007, claims 21-31 were rejected under 35 USC 103(a) as being unpatentable over Sridharan in view of Huang.

Claim 21:

Claim 21 includes limitations substantially similar to the limitations discussed in section I above. For example, claim 21 has been amended herein to require, "a module ... that performs reading of the compile listing and ... the module performs attaching to an address space used by the application during real-time operation to obtain a value for one or more of the plurality of variables during the real-time operation of the application." For at least the reasons established above in section I, Applicant respectfully submits that independent claim 21 is not taught or suggested by the cited art and respectfully request allowance of this claim.

IV.   Sridharan in view of Huang does not teach or suggest an address map with an offset associated with each of a plurality of variables of an application.

Claim 21 has been amended herein to recite, "a compile listing stored on a computer-readable medium having an address map with an offset associated with each of a plurality of variables of an application." Applicant respectfully submits that this amendment does not introduce any new matter and is fully supported in at least paragraph 0051 of the specification as originally filed.

The Office Action had relied on section 3.2 of Huang with the disclosure, "When an object is mapped, it can be read or written by simply reading or writing an address location within the address space corresponding to the offset of the byte in the object." Therefore, Huang discloses that each offset is in the each object. Claim 21 has been amended to clarify that the address map includes an offset for each of a plurality of variable of an application. Applicant respectfully submits that Huang does not teach or suggest such an address map. Further, the disclosure in

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section 4.3 of Huang relied on in the Office Action does not disclose an address map as claimed herein. Applicant respectfully submits that the various Lock call such as the AcquireLock call do not teach or suggest an address map with an offset associated with each of a plurality of variables of an application. Rather, section 4.3 of Huang merely discloses that an object can be requested to have a read or write lock on the object.

For at least the reasons established above in sections I and IV, Applicant respectfully submits that independent claim 21 is not taught or suggested by the cited art and respectfully requests allowance of this claim.

Dependent claims 22-31 depend directly or indirectly from independent claim 35 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in sections I and IV above, Applicant respectfully submits that claims 36-38 are not taught or suggested by the cited art and respectfully request allowance of these claims.

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CONCLUSION

Applicant respectfully submits that the present application is in condition for allowance for the reasons stated above. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting the application, he is encouraged to telephone the undersigned at (972) 731-2288.

The Commissioner is hereby authorized to charge payment of any further fees associated with any of the foregoing papers submitted herewith, or to credit any overpayment thereof, to Deposit Account No. 21-0765, Sprint.

Respectfully submitted,

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